# Global and China CMOS Camera Module Industry Report, 2012-2013

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## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## INFORMATION SOURCES

The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

# Abstract

Global and China CMOS Camera Module Industry Report, 2012-2013 mainly covers the followings:

1. Image sensor / optical lens / camera module industry pattern;
2. CMOS camera module downstream market;
3. 7 image sensor companies;
4. 16 optical lens companies;
5. 12 camera module vendors;
6. 4 AFA companies

The CMOS camera module industry chain is quite complex, with key links covering CMOS sensor, optical lens, AFA, filter and module, which accounted for about 52%, 19%, 6%, 3% and 20% of the market size in 2012, respectively.

The CMOS camera module industry market size in 2012 was approximately US$10.8 billion, an increase of 24.1% over 2011, mainly driven by the great improvement in smartphone camera pixels, which extended into 2013, whereupon the mainstream smartphone camera pixels will be raised from 5MP to 8MP, and the high-end smartphone as high as 13MP.

In 2013, all smartphones will be equipped with AFA, and high-end ones given with the OIS (optical image stabilisation) function, which has been popular in digital cameras but fairly rare in mobile phones, and will see significant growth. The emergence of OIS not only promotes the function of mobile phone photography further, but also improves the video shooting function to a greater extent. To achieve this, a gyroscope (Invensense as the main supplier) and an OIS driver IC (SANYO or ROHM as the main supplier) are of the essence. 13MP and OIS constitute the main driving force for the mobile phone camera module market growth. It is expected that in 2013 CMOS camera module market size will climb 23.1% over 2012 to US$13.3 billion.

In the field of image sensor, Omnivision did all it could do to catch up from the second half of 2012 by lowering prices to stimulate sales. The consequent substantial growth of 50% in shipment narrowly kept its dominant position in the field of non-digital camera CMOS image sensor, followed closely by Samsung Electronics and Sony, especially Sony, the first to enter 13MP field and with more than 70% market share. China's Galaxy Core relying on SMIC almost monopolizes the domestic low- and medium-end market, with shipment in 2012 exceeding 600 million units.

With the dramatic advancements in mobile phone camera pixels, optical lens companies have shown signs of polarization.

Technically-excellent companies focusing on the high-end market are getting swelling market share, while technically laggard peers targeting the low- and medium-end market cannot make any progress. The 8-megapixel technical threshold has been already high, not to mention the 13-megapixel, although many companies are able to produce 13-megapixel optical lens, the key is the low yield rate, only going beyond 90% can the high profit margins be guaranteed. The best example is Largan Precision Co., Ltd. whose gross margin has never been less than 40%, and high-end products outnumber 50%. By comparison, a majority of companies only have a 10-15% gross margin, even 5% for ones with backward technology. As a result, many of them abandoned the high-end market.

Fujinon, KMOT and Digital Optics are the second-tier members. Fujinon pays close attention to the more lucrative professional-grade camera lens and DC lens rather than mobile phones, which causes an annual revenue decline. With DC lens and DVD OPU business, KMOT shows great interest in the field of mobile phones, and may challenge Largan Precision's status by virtue of rapid business growth. As a South Korean company, Digital Optics has witnessed fast-growing developments, with principle activities concentrated on the high-end market.

With respect to the camera module field, LG-INNOTEK, pulled by the big customer Apple, saw a substantial increase in revenue; SEMCO's revenue increased by almost 100% relying on the strong drive of Samsung mobile phones, very nearly the same as LG-INNOTEK's; benefiting from the greatly increased shipments of Huawei and ZTE mobile phone, the Mainland vendor Sunny Optical doubled revenue. South Korea-based Patron displayed the fastest growth, entering Samsung's supply chain for the first time, with an increase of up to 189%. Downhearted vendors include Foxconn, whose market share shrank resulting from order-robbing by the specialized enterprises like Sunny Optical Technology, and revenue was dragged down by the sharply dropped shipments of its big customer Nokia; so did STMicroelectronics.

**Revenue of the World's Leading CMOS Camera Module Vendors, 2010-2012 (Unit: US$M)**

| | 2010 | 2011 | 2012 |
|---|---|---|---|
| FOXCONN | 898 | 1028 | 886 |
| SEMCO | 580 | 737 | 1448 |
| SHARP | 660 | 786 | 790 |
| LG-INNOTEK | 508 | 1098 | 1475 |
| VISTA POINT | 208 | 188 | 110 |
| LITEON | 278 | 413 | 776 |
| BYD | 160 | 170 | 238 |
| TRULY | 98 | 108 | 151 |
| CHICONY | 366 | 425 | 473 |
| PRIMAX | 198 | 276 | 368 |
| TOSHIBA | 502 | 478 | 460 |
| STMICRO | 597 | 615 | 460 |
| Patron | 90 | 194 | 560 |
| SAMSUNG Fiberoptic | 310 | 320 | 362 |
| Sunny | 158 | 186 | 380 |
| KMOT | 160 | 140 | 267 |
| Cowell | 102 | 193 | 250 |

SOURCE: researchinchina.com
Global and China CMOS Camera Module Industry Report, 2012-2013



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